



# **ELECTRICAL CURRENTS**

*Newsletter from the Office of the Chief Electrical Inspector*

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## ● **Transition To New Electrical Examinations Scheduled For January 1, 2004**

The revisions to chapter 19.28 RCW from the 2003 Legislative session have been completed and are now available online at: <http://www.leg.wa.gov/RCW/>. We expect to have new examinations, based on currently adopted regulations, available from LaserGrade starting January 1, 2004.

Master electrician examinations will be available for the first time on January 1, 2004. The new master electrician and electrical administrator examinations are divided into sections. All examinations include a "Code" and "Administration and Theory" section. The new 01 General and 02 Residential master electrician and electrical administrator examinations include a third section, "Major Calculations."

To be fair, candidates who have passed a section(s) of an old examination but have not completed the entire examination (i.e. passed all sections within one year of beginning the examination) prior to January 1, 2004 may choose to continue with the old examination sections for the time period allowed in WAC 296-46B-960(3) (i.e. one year after beginning the exam).

All new examinations will be based on currently adopted regulations. New reference materials include the 2002 National Electrical Code (NEC), the April 2003 (red cover) printing of WAC 296-046B, and the new chapter 19.28 RCW.

## ● **Proposed Examination Extension For New Specialty "Open Window" Temporary Electricians And Administrators**

The department is proposing a change to WAC 296-46B Tables 930-1 and 950-1 to allow "open window" temporary electrician and electrical administrator candidates for new specialties, who apply prior to January 1, 2004, appropriate time to pass their examination. The proposed change will allow all candidates to have at least the amount of time allowed in the current WAC (i.e. 12-months for administrators and 24-months for temporary specialty electricians) to complete their examinations. The department is proposing this change because the examinations for these specialties will not be available until January 1, 2004.

New specialties include 06B-HVAC/R-Restricted, 07C-Restricted Nonresidential Maintenance, 07D-Appliance Repair, and 07E-Equipment Repair.

## ● **Unlisted Equipment Will Not Be Permitted To Operate Without Special Approval**

In order to meet the minimum electrical safety standards for installations, all materials, devices, appliances, and equipment, not exempted in chapter 19.28 RCW, must conform to appropriate standards recognized by the department, be listed, or field evaluated. Other than as allowed in WAC 296-46B-030(3), equipment must not be energized until such standards are met unless specific permission has been granted by the chief electrical inspector. Approval will be granted through the variance process.

## ● **Mobile/Manufactured Home Electrical Alterations**

Mobile/manufactured homes must meet applicable standards adopted by the department in WAC 296-150M. Any electrical alteration made in or on these homes must be inspected and approved by a factory assembled structure (FAS) inspector. Department electrical inspectors will not approve a service and/or feeder to a mobile/manufactured home that has been altered unless evidence of FAS inspection and approval is available.

## ● **SSB 5434 And Nonprofit Corporations**

Senate Substitute Bill (SSB) 5434 passed in the 2003 Legislative Session allows an electrical contractor licensing exemption for a nonprofit corporation under 26 U.S.C. Sec. 501 (c)(3). The bill also allows the

nonprofit corporation to use appropriately certified electricians and supervised trainees to perform electrical installation, repair, or maintenance on the corporation's facilities. Volunteer electricians and trainees cannot receive any type of compensation for the work. The total value of the electrical work (e.g. design, labor, materials, equipment, permits, etc.) cannot exceed \$30,000. Although exempt from electrical contractor licensing, the nonprofit corporation must obtain the proper electrical work permits and ensure they follow all electrician certification and trainee supervision ratio requirements of chapter 19.28 RCW. Any group attempting to purchase a permit under this new exemption should be prepared to supply a copy of the "qualifying" letter from the Internal Revenue Service (IRS) granting the entity the right to claim the 501(c)(3) non-profit status.

According to federal requirements, **U.S.C. Sec. 501 (c)(3)** nonprofit corporations include corporations, and any community chest, fund, or foundation organized and operated exclusively for religious, charitable, scientific, testing for public safety, literary, or educational purposes, or to foster national or international amateur sports competition, or for the prevention of cruelty to children or animals. None of the corporation's net earnings may benefit any private shareholder or individual. No activities may carry on propaganda, influence legislation, or intervene in any political campaigns for public office.

The **statute did not** grant electrical contractor licensing exemption to **U.S.C. Sec. 501(c)(4)** entities (e.g. civic leagues, social welfare organizations, and local associations of employees with earnings devoted exclusively to charitable, educational, or recreational purposes).

### ● Flat Conductor Speaker Wire

Limited Energy stakeholders made us aware of the introduction of a new "flat wire" low voltage speaker cable product intended for installation (retrofitting) on the surfaces of existing buildings. The product is intended to be covered by wallpaper or drywall taping compound and paint. No electrical testing laboratory approved in Washington provides a listing for this type of "flat wire" cable. All cabling installed in Washington must be listed or field evaluated. Installations using unlisted or field evaluated materials will not be approved.

### ● Disconnects Ahead Of Metering Equipment

Many electrical utilities require an accessible disconnect ahead of 200 amp or less, three-phase, 277/480 line voltage meter sockets. This disconnecting means is not a requirement of the National Electrical Code (NEC). The disconnect serves as an additional safety device for utility personnel needing to maintain and work in the metering equipment.

2002 NEC 230.82 (2) has been modified to include disconnect switches installed ahead of a meter as "Equipment Connected to the Supply Side of Service Disconnect."

The department will accept disconnect switches ahead of a meter without integral or immediately adjacent overcurrent protection and will allow the enclosures to be grounded with the system grounded circuit conductor per NEC 250.142(A)(1). In the past, the department has required disconnect switches to be installed as a service disconnecting means meeting the NEC requirements for overcurrent protection, main bonding jumper installation, and grounding electrode conductor termination.

### ● Electrical Question of the Month

**This Month's Question:** You are asked to investigate the failure of the electric radiant ceiling heating cable system in the living room of an apartment in an existing building. When you open the junction box for the line-voltage thermostat controlling the area, you see that the nonheating leads of the heating cable are blue. This heating cable is designed for a \_\_\_\_\_ volt system. **A) 120, B) 208, C) 240, D) 277**

**Last Month's Question:** Built-in dishwashers and trash compactors shall be permitted to be cord-and-plug connected with a flexible cord identified as suitable for the purpose in the installation instructions of the appliance manufacturer where the length of the cord is \_\_\_\_\_. **A) less than 24 inches, B) less than 36 inches, C) 36 to 48 inches, D) as short as practicable. The answer is: C) [NEC 422.16(B)(2)(2)].**